

Subject	Year 10 Chemistry Threshold Concepts – Summer Term	• How to support students' learning
Analysis	Pure substances • Use melting point and boiling point data to distinguish pure from impure substances. Formulations • Identify formulations given appropriate information. Students do not need to know the names of components in proprietary products. Chromatography • Explain how paper chromatography separates mixtures • Suggest how chromatographic methods can be used for distinguishing pure substances from impure substances • Interpret chromatograms and determine R_f values from chromatograms • Provide answers to an appropriate number of significant figures. Testing for gases • Identify a test for Hydrogen using a burning splint held at the open end of a test tube of the gas. Hydrogen burns rapidly with a pop sound • Identify a test for Oxygen with a glowing splint inserted into a test tube of the gas, the splint relights • Identify a test for Carbon Dioxide using an aqueous solution of	Encourage your child to visit BBC bitesize to read about separating mixtures using chromatography and how to calculate R_f values Chromatography - Purity and separating mixtures - OCR Gateway - GCSE Combined Science Revision - OCR Gateway - BBC Bitesize Encourage your child to watch this video on the tests for different gases GCSE Chemistry - How to Test for Gases - Testing for Chlorine / Oxygen / Hydrogen / CO2 #64 - YouTube

	calcium hydroxide (lime water). When carbon dioxide is shaken with or bubbled through limewater the limewater turns milky (cloudy) • Identify a test for Chlorine using litmus paper. When damp litmus paper is put into chlorine gas the litmus paper is bleached and turns white Triple only Flame tests • Identify some metal ions (cations) - Lithium, sodium, potassium, calcium and copper compounds Metal hydroxides • Students should be able to write balanced equations for the reactions to produce the insoluble hydroxides. Testing for anions • Students should be able to recall the tests for carbonates, sulphates and halide ions Instrumental methods • Students should be able to state advantages of instrumental methods compared with the chemical tests in this specification	Encourage your child to visit BBC bitesize to read about the tests used to identify ions in compounds Testing for ions and gases - Testing for ions and gases - GCSE Chemistry (Single Science) Revision - Other - BBC Bitesize
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	Flame emission spectroscopy •Students should be able to interpret an instrumental result given appropriate data in chart or tabular form, when accompanied by a reference set in the same form, limited to flame emission spectroscopy	
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